

Buprenorphine found superior to Methadone in treating infants born in drug withdrawal

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A study of two opioids used to wean babies born in withdrawal from drugs their mothers have taken shows that buprenorphine is superior to methadone in reducing duration of treatment and length of hospital stay.

While buprenorphine is often prescribed for [pregnant women](#) who are undergoing addiction therapy, this study is the first report of the drug being used to treat newborns in clinical practice.

Infants born to women who are dependent on opioids are likely to experience withdrawal symptoms, a condition known as [neonatal abstinence syndrome](#) (NAS). The incidence of NAS in the United States has increased dramatically, reaching 5.8 per 1,000 live births in 2012.

"The burden of NAS on public healthcare and on the family may be mitigated partially through the judicious selection of a therapeutic agent," says Eric Hall, PhD, a researcher in the Perinatal Institute at Cincinnati Children's Hospital Medical Center and lead author of the study. "Buprenorphine therapy may be superior to methadone for the management of [infants](#) with NAS experiencing select opioid exposures, including those whose mothers are not receiving methadone therapy or using methadone illicitly while pregnant."

The study was conducted among 201 infants at six newborn nurseries in southwest Ohio. Thirty-eight infants received a five-step buprenorphine protocol, while 163 received a standard eight-step methadone protocol.

Those receiving buprenorphine had a course of treatment on average of 9.4 days, compared to 14 days for those on methadone therapy. Length of [hospital stay](#) for infants on buprenorphine was 16.3 days, compared to 20.7 days for those on [methadone](#) therapy.

"These findings suggest that outcomes for NAS may be further optimized by developing individualized treatments centered on the type of opioid pregnant women are exposed to," says Dr. Hall, who has a joint appointment in the division of Biomedical Informatics at Cincinnati Children's.

A recent article in *The New England Journal of Medicine* noted an increase in the admission for NAS to newborn intensive care units from seven cases per 1,000 admissions to 27 per 1,000 admissions from 2004 through 2013. These infants often are born in critical condition, having been exposed in utero to a range of opiates and opioids, from Percocet and Vicodin to heroin.

The study is published online in the *Journal of Pediatrics*.

Provided by Cincinnati Children's Hospital Medical Center

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